

CLAIMS

The invention claimed is:

1. An automatic control system for an automotive vehicle comprising:
 - a light sensor package, the light sensor package comprising at least one semiconductor light sensing transducer and sensor logic in communication with each light sensing transducer, the sensor logic generating a discrete light signal based on light incident on each light sensing transducer over an integration period;
 - control logic coupled to the light sensor package, the control logic generating at least one equipment control signal based on the discrete light signal; and
 - vehicle equipment coupled to the control logic responsive to the at least one equipment control signal.
2. The automatic control system of claim 1, wherein the integration period is variable.
3. The automatic control system of claim 1, wherein the light sensor package comprises a signal pin, a power pin, and a ground pin.
4. The automatic control system of claim 3, wherein the control logic is coupled to the signaling pin, the control logic receiving the discrete light signal through the signaling pin.
5. The automatic control system of claim 4, wherein the integration period is variable, the control logic generating an integration control signal.

6. The automatic control system of claim 5, wherein the integration control signal is received by the sensor package through the signaling pin.

7. The automatic control system of claim 1, wherein each semiconductor light sensing transducer views the same spatial area.

8. The automatic control system of claim 1, wherein the light sensor detects incident light within a target spatial distribution, the control logic generating at least one equipment control signal based on the discrete light signal without mapping the discrete light signal to an area within the target spatial distribution.

9. A system for generating a control signal for automatically controlling equipment in an automotive vehicle comprising:
at least one semiconductor light sensor, each light sensor comprising at least one light sensing transducer receiving light from a target area over an integration period, each light sensor operative to generate a discrete light signal based on the amount of received light; and
a control logic in communication with the equipment and the at least one light sensor, the control logic operative to generate the control signal based on the discrete light signal without forming an image of the target area.

10. A system for generating a control signal for automatically controlling equipment in an automotive vehicle comprising:

at least one semiconductor light sensor operative to detect light within a target spatial distribution and to generate a discrete light signal based on the detected light, each light sensor comprising at least one light sensing transducer for detecting the light over an integration period; and

control logic in communication with the at least one light sensor and the equipment, the control logic generating the control signal based on the discrete light signal without mapping the discrete light signal within the target spatial distribution.

11. A system comprising:

at least one semiconductor light sensor having variable sensitivity to light, each light sensor operative to output a light signal indicative of the intensity of light incident on the light sensor;

control logic in communication with the at least one light sensor, the control logic operative to vary the sensitivity of the at least one light sensor and to generate at least one equipment control signal based on the light signal; and

automotive vehicle equipment in communication with the control logic responsive to the at least one equipment control signal.

12. The system of claim 11, wherein the at least one light sensor includes an ambient light sensor, the sensitivity varied by the control logic is an integration period for integrating charge produced by light incident on the light sensor, the sensitivity based on the light signal from the ambient light sensor.

13. The system of claim 12, wherein the automotive vehicle equipment comprises an electrochromic mirror and wherein the ambient light sensor views an area forward of the vehicle.

14. The system of claim 12, wherein the automotive vehicle equipment comprises at least one headlamp and wherein the ambient light sensor views a skyward area.

15. The system of claim 11, wherein the automotive vehicle equipment comprises a means of removing moisture from a vehicle window and wherein the at least one light sensor views light reflected from the window to determine the presence of moisture on the window.